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# EPISIOTOMY – TRENDS AND PREVALENCE IN HEALTH CENTER VRANJE FOR THE PERIOD 1996 – 2021. YEAR

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**Abstract:** With this paper, we wanted to determine the prevalence of episiotomy in the completion of childbirth in the Gynecology and Obstetrics Department of the General Hospital in Vranje in the twenty-five-year period (1996-2021), and this is the period since it is recommended to abandon routine episiotomy. We also wanted to compare the obtained results with the results of similar studies by other authors and thus determine whether the general trend of reduced use of this obstetric operation due to the numerous complications that its use causes, exists in our country. Retrospective analysis includes data obtained from birth protocols with special reference to patients born vaginally and their parity. Childbirth completed using a vacuum extractor and caesarean section were analyzed separately. Such births for the first and last year of the examined period were presented and analyzed (1996, 2021). Aggregate data for both years were also analyzed. The obtained results are expressed numerically and presented using tables. Based on the data, it was concluded that the total number of births decreased, that the number of cesarean sections increased, that episiotomy in vaginal delivery was the most common among primiparous women and that episiotomy was significantly higher in our sample than in other studies.

*Keywords: pregnancy, childbirth, episiotomy, parity.*

## 1. INTRODUCTION

Episiotomy is a surgical procedure (very common in obstetric practice), which is performed to facilitate the passage of the fetus during vaginal birth. Seven episiotomy incisions have been described in the literature, although only midline, mediolateral, and lateral episiotomies are commonly used (Kalis et al., 2012). It is recommended to prevent more serious injuries in a normal birth. The episiotomy was first mentioned and described in the scientific literature in 1741 (Harrison, Brennan, & North, 1984). At the beginning of the 20th century, it became widely used and became part of the doctor's routine. It is a time of increased women going to hospitals for childbirth, when doctors are involved in the normal uncomplicated birth process. It has been introduced into clinical practice without a clear medical justification and scientific basis (Schantz et al., 2015). Some justifications for the use of episiotomy have been accepted: it facilitates childbirth, saves the baby's head from trauma and prevents perineal lacerations and stretching of the pelvic floor muscles, which prevents the consequent uterovaginal prolapse. In the 1980s, the real benefits of its routine application began to be questioned. During the 1990s, large studies showed that the benefits of episiotomy were small and that the frequency of complications was higher with routine use. The recommendations of the World Health Organization (WHO) that this surgical procedure is applied only in certain cases date from that period (Harrison, Brennan, & North, 1984). Like all surgical interventions, episiotomy is not without consequences. Its main disadvantages are: increased postpartum hemorrhage, local pain that lasts for weeks and months and which prevents sitting, makes breastfeeding and sexual intercourse more difficult, because the scar makes the vagina less elastic, wound infections, rectovaginal fistulas, tearing and consequent weakening of the pelvic muscles bottoms with consequent incontinence.

For all these reasons, episiotomy has its place in obstetric practice and it is impossible to never apply it (Amorim et al., 2014) but it should be reserved only for special cases and it is necessary in case of risk of serious perineal injuries and fourth degree rupture with anal sphincter injury and consequent fecal and urinary incontinence (Swift et al., 2014). It is necessary for fetal macrosomia, use of forceps or vacuum extractors, abnormal postures (pelvic, personal ...), shoulder dystocia, fetal hypoxia, etc. (Dinulović et al., 1996) .Some clinicians believe that routine episiotomy, surgical incision of the vagina and perineum, will prevent serious injuries during childbirth. On the other hand, episiotomy guarantees perineal trauma and suture application.In women who do not have an instrumental delivery, a policy of selective episiotomy leads to fewer women with severe perineal and vaginal trauma. Other findings, neither short-term nor long-term, provide clear evidence that selective episiotomy policies lead to harm to the mother or baby.

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Research has shown that the belief that routine episiotomy reduces perineal and veginal trauma is not justified (Jiang et al., 2017).

## 2. MATERIAL AND METHODS

With this paper, we wanted to determine the prevalence of episiotomy in the completion of childbirth in the Gynecology and Obstetrics Department of the General Hospital in Vranje in the twenty-five-year period (1996-2021), and this is the period when it is recommended to abandon routine episiotomy. We also wanted to compare the obtained results with the results of similar studies by other authors and thus determine whether the general trend of reduced use of this obstetric operation due to the numerous complications that its use causes, exists in our country.

The retrospective analysis included data obtained from birth protocols on patients born at the Gynecology and Obstetrics Department of the General Hospital in Vranje, with special reference to patients born vaginally and their parity. Childbirth completed using a vacuum extractor and caesarean section were analyzed separately. Such births in the twenty-five-year period for the first and last year of this period were presented and analyzed (1996, 2021). Aggregate data for both years were also analyzed. The obtained results are expressed numerically and presented using tables.

## 3. RESULTS

Table 1 in the first part indicates the number and percentage of spontaneous births, births with vacuum extraction and caesarean section in relation to their total number. There is a noticeable decrease in the number of births completed spontaneously from 84.6% in 1996 to 59.9% in 2021, as well as a decrease in the number of deliveries completed by vacuum extraction from 3.6% in 1996 to 1.6% in 2021, with a simultaneous increase in the number of caesareans from 11.7% in 1996 to 38.5% in 2021.

Table 1. Ways of ending childbirth

| Years | Spontaneous delivery | | Vacuum extractor | | Caesarean section | | ∑ |
|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | |
| ***1996*** | 1958 | 84,6 | 84 | 3,6 | 271 | 11,7 | **2313** |
| ***2021*** | 814 | 59,9 | 21 | 1,6 | 522 | 38,5 | **1357** |
| ∑ | **2772** | **75,5** | **105** | **2,9** | **793** | **21,6** | **3670** |

Table 1 in the second part shows that in the examined years the total number of births was 3670 and that there was a significant decrease in the total number of births in 25 years, from 2313 births in 1996 to 1357 in 2021. In these two examined years, there were 2772 (75.5%) deliveries completed spontaneously, 105 (2.9%) by vacuum extraction and 793 (21.6%) by caesarean section.

Table 2 Shows the parity of patients born spontaneously. It can be noticed that in the examined years the percentage of patients by parity is almost the same: 42.6% were first-born in 1996 and 41.3% in 2021, 36.4% in the second-born in 1996 and 37.1% in 2021, and 1996 in multi-year-olds. 21.0% in 2121 and 21.6% in 2021.

Table 2. Parity of patients born spontaneously

| Years | First-born | | Second-born | | Multi-born | | ∑ |
|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | |
| ***1996*** | 834 | 42,6 | 713 | 36,4 | 411 | 21,0 | **1958** |
| ***2021*** | 336 | 41,3 | 302 | 37,1 | 176 | 21,6 | **814** |
| ∑ | **1170** | **42,2** | **1015** | **36,6** | **587** | **21,2** | **2772** |

In our research, first-borns are the most common - there were 1394 (42.1%), followed by second-born 1216 (36.6%), while there were at least 705 multi-born (21.3%).

Table 3. Frequency of episiotomy in spontaneous births depending on the parity of patients

| Years | Episiotomy and vaginal delivery | | | | | | ∑ |
|---|---|---|---|---|---|---|---|
| | First-born | | Second-born | | Multi-born | | |
| | yes | no | yes | no | yes | no | |
| ***1996*** | 749(38,3) | 58(3,0) | 413(21,1) | 325(16,6) | 67(3,4) | 346(17,6) | **1958** |
| ***2021*** | 258(31,7) | 19(2,3) | 126(15,5) | 157(19,3) | 22(2,7) | 232(28,5) | **814** |
| ∑ | **1007(35,6)** | 77(2,7) | **539(18,8)** | 482(17,7) | **89(3,1)** | 578(22,1) | **2772** |

Considering the prevalence of episiotomy in vaginal delivery according to the parity of patients, we obtained data that it is the most common among primiparous women (25.6%) and that this percentage is slightly lower in the last study year 2021 (31.7%) compared to the first study year 1996. (38.3%). Episiotomy is least common in multiples (2.7%).

Table 4. Prevalence of episiotomy in the two examined years

| Years | Vaginal delivery | | | | ∑ |
|---|---|---|---|---|---|
| | With episiotomy | | Without episiotomy | | |
| | ∑ | % | ∑ | % | |
| ***1996*** | 1229 | 62,8 | 729 | 37,2 | **1958** |
| ***2021*** | 471 | 57,9 | 343 | 42,1 | **814** |
| ∑ | **1700** | **61,3** | **1072** | **38,7** | **2772** |

Table 4. Shows that the prevalence of episiotomy in vaginal delivery is slightly different in the first year of 1996, 62.8% and in 2021, 57.9%.

In our examined material, episiotomy was present in 61.3% of vaginal births.

## 4. DISCUSSION

Starting from the fact that there is no consensus in the scientific community on the optimal frequency of practicing episiotomy, our research was conducted.

The obtained results show that the number of women born at the Gynecology and Obstetrics Department in Vranje is evidently decreasing - from 2313 in 1996 to 1357 in 2021. In the examined years, the total number of births was 3670. Out of that number, 793 births were completed by caesarean section, which is 21.6%. The percentage of caesareans was the lowest in 1996 (11.7%). The trend line of caesarean section application is ascending with a peak in the last examined year 2021 (38.5%). Comparing these data with the data for Serbia and with our data for the period 1991-2000 (which we announced at the Gynecology and Obstetrics Week in Belgrade in 2010), (Janjić, 2010), it is noticeable that the upward trend of increasing the percentage of cesarean sections has begun in that decade and continues to do so. In the same years, there was a decrease in deliveries completed spontaneously from 84.6% in 2016 to 59.9% in 2021, as well as a decrease in deliveries completed by vacuum extraction from 3.6% in 2016 to 1.6% in 2021. years.

This increased prevalence of caesarean section, with a simultaneous reduction in deliveries completed by vacuum extraction, was found in other maternity hospitals. It is, perhaps, the result of the general pressure of the environment, the public and the media on obstetricians that has lasted for years, and it is related to the misinterpretation of patients' rights, and perhaps the result of inexperience of young obstetricians. Cesarean section under this pressure reduces the responsibility and stress of the obstetrician.

Parity is defined as the number of pregnancies completed by delivery after 24 weeks of gestation before the analyzed pregnancy - delivery. The largest number of spontaneously born women were first-born and the least multi-born. Considering the prevalence of episiotomy in vaginal delivery according

to the parity of patients, we obtained data that it is most common among primiparous women (35.6%) and that this percentage is almost the same in the first study in 1996 (38.3%) and in the last 2021 (31 , 7%), and the least represented in multiples (3.1%) with almost the same 3.4% in the first survey in 1996 as in the last 2021. These data are correlated with data from similar studies, where the prevalence of episiotomy in primiparous women in spontaneous delivery was ≥ 30% (Lede, Belizan, & Carroli, 1996).

In our examined material, episiotomy is present in 61.3% of vaginal births, which is significantly more than the recommendation of the World Health Organization, which advises that the procedure be applied in 10% of births, which is the reality in most European countries. indicate that this rate should be 15 and 30%, (Harrison, Brennan, North, 1984; Lede, Belizan, & Carroli, 1996). ie that the use of episiotomy in one of five spontaneous births would be ideal (Henriksen et al., 1992). In contrast to ours, data in the domestic literature indicate that the frequency of episiotomy in spontaneous births is 80%, with primiparous women also representing 80% (Dinulović et al., 1996). Comparison of our data with data from some other authors, according to which episiotomy was performed in about 40% of all vaginal births in the United States, (Weeks, & Kozak, 2001) and that in Canada, as recommended, this frequency was reduced from 37.7% to 29 , 1% (Graham, & Graham, 1997), showed that there is a far higher prevalence of episiotomy in our sample.

The question remains today whether to routinely or selectively apply episiotomy in primiparous women as a method of preventing laceration of the perineum to a greater degree and consequent complications? However, it must be taken into account that in the selective application of episiotomies, periurethral, small lips and high lacerations of the vagina are more frequent (Rodriguez et al., 2008; Carroli, & Mignini, 2009) Further research in women with instrumental termination of labor with standardized outcome assessment methods may help clarify whether routine episiotomy is useful in this particular group (Jiang et al., 2017).

This paper, we believe, can be another contribution to resolving this dilemma.

## 5. CONCLUSION

The conducted research showed:

– that the number of women born at the Gynecology and Obstetrics Department in Vranje is permanently decreasing, with a simultaneous increase in the number of caesareans, which coincides with the general trend of their increase,

– that episiotomy in vaginal birth is the most common among primiparous women,

– that the prevalence of episiotomy in our sample is significantly higher than in other available studies,

– that without a doubt the final decision on the use of episiotomy due to consequent complications may be made by the obstetrician at the time of immediate childbirth and

– that every woman should be informed about the episiotomy and that she should express a wish not to be done, but she must be aware that it is necessary in some situations. This would avoid cases classified as “obstetric violence”. It is an intervention on the body and the patient should be consulted.

**Conflict of interests**

The author declares no conflict of interest.

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